

## Product datasheet for **RC400054**

### **p53 (TP53) (NM\_000546) Human Mutant ORF Clone**

#### **Product data:**

Product Type:	Mutant ORF Clones
Product Name:	p53 (TP53) (NM_000546) Human Mutant ORF Clone
Mutation Description:	C238G
Affected Codon#:	238
Affected NT#:	c.712
Nucleotide Mutation:	TP53 mutant (C238G), Myc-DDK-tagged ORF clone of Homo sapiens tumor protein p53 (TP53), transcript variant 1 as transfection-ready DNA
Effect:	Missense
Symbol:	p53
Synonyms:	BCC7; BMFS5; LFS1; P53; TRP53
E. coli Selection:	Ampicillin (100 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-Myc-DDK (PS100007)
Tag:	Myc-DDK
ACCN:	NM_000546
ORF Size:	1182 bp
Restriction Sites:	Sgfl-Mlul



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**ORF Nucleotide Sequence:**

>RC400054 representing NM\_000546  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGAGGAGCCGAGTCAGATCCTAGCGTCGAGCCCCCTCTGAGTCAGGAAACATTTTCAGACCTATGGA  
 AACTACTTCTGAAAACAACGTTCTGTCCCCCTTGCCCGTCCCAAGCAATGGATGATTTGATGCTGTCCCC  
 GGACGATATTGAACAATGGTTCCTGAAGACCCAGGTCCAGATGAAGCTCCAGAAATGCCAGAGGCTGT  
 CCCCCGTGGCCCTGCACCAGCAGCTCTACACCGGCGGCCCTGCACCAGCCCCCTCTGGCCCTGT  
 CATCTTCTGTCCCTCCAGAAAACCTACCAGGCAGCTACGGTTTCCGTCTGGGCTTCTTGCACTTCTGG  
 GACAGCCAAGTCTGTGACTTGCACGTAATCCCTGCCCTCAACAAGATGTTTTGCCAACTGGCCAAGACC  
 TGCCCTGTGCAGCTGTGGTTGATTCCACACCCCGCCCGCACCCGCGTCCGCGCCATGGCCATCTACA  
 AGCAGTCACAGCACATGACGGAGTTGTGAGGCGCTGCCCCACCATGAGCGCTGCTCAGATAGCGATGG  
 TCTGGCCCTCCTCAGCATCTTATCCGAGTGAAGGAAATTTGCGTGTGGAGTATTTGGATGACAGAAAC  
 ACTTTTCGACATAGTGTGGTGGTGCCTATGAGCCGCCTGAGGTTGGCTCTGACTGTACCACCATCACT  
 ACAACTACATGGGTAACAGTTTCTGCATGGGCGGCATGAACCGGAGGCCATCCTCACCATCATCACT  
 GGAAGACTCCAGTGGTAATCTACTGGGACGGAACAGCTTTGAGGTGCGTGTGTTGTGCCTGTCTGGGAGA  
 GACCGGCGCACAGAGGAAGAGAATCTCCGCAAGAAAGGGGAGCCTCACCACGAGCTGCCCCAGGGAGCA  
 CTAAGCGAGCACTGCCAACACACCAGCTCCTCTCCCGCCAAAGAAGAAACCACTGGATGGAGAATA  
 TTTACCCCTTCAGATCCGTGGGCGTGAGCGCTTCGAGATGTTCCGAGAGCTGAATGAGGCCTTGGAACTC  
 AAGGATGCCAGGCTGGGAAGGAGCCAGGGGGAGCAGGGCTCACTCCAGCCACCTGAAGTCCAAAAAGG  
 GTCAGTCTACCTCCCGCCATAAAAACTCATGTTCAAGACAGAAGGGCCTGACTCAGAC

**ACGCGT**ACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC400054 representing NM\_000546  
 Red=Cloning site Green=Tags(s)

MEEPQSDPSVEPPLSQETFSDLWKLLENVLSPLPSQAMDDLMLSPDDIEQWFTEDPGPDEAPRMEAA  
 PPVAPAPAAPTAAAPAPAPSWPLSSSVPSQKTYQGSYGFRLGFLHSGTAKSVTCTYSPALNKMFCQLAKT  
 CPVQLWVDSTPPPGRVTRAMAIYKQSQHMTEVVRRCPHHERCSDSDGLAPPQHLIRVEGNLRYEYLDNRN  
 TFRHSVVVPYEPPEVGSDCCTIIHYNMGNSSCMGMNRRPILTIITLEDSSGNLLGRNSFEVRVCACPR  
 DRRTEENLRKKGEPHELPPGSTKRALPNNTSSSPQPKKPLDGEYFTLQIRGRERFEMFRELNEALEL  
 KDAQAGKEPGSRAHSSHLKSKKGQSTRHKKLMFKTEGPDS

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



**OTI Disclaimer:**

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:**

This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:**

The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**RefSeq:**

[NP\\_000537](#)

**RefSeq Size:**

2629 bp

**RefSeq ORF:**

1182 bp

**Locus ID:**

7157

**Cytogenetics:**

17p13.1

**Domains:**

P53

**Protein Families:**

Druggable Genome, Stem cell - Pluripotency, Transcription Factors

**Protein Pathways:** Amyotrophic lateral sclerosis (ALS), Apoptosis, Basal cell carcinoma, Bladder cancer, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, Glioma, Huntington's disease, MAPK signaling pathway, Melanoma, Neurotrophin signaling pathway, Non-small cell lung cancer, p53 signaling pathway, Pancreatic cancer, Pathways in cancer, Prostate cancer, Small cell lung cancer, Thyroid cancer, Wnt signaling pathway

**MW:** 43.6 kDa

**Gene Summary:** This gene encodes a tumor suppressor protein containing transcriptional activation, DNA binding, and oligomerization domains. The encoded protein responds to diverse cellular stresses to regulate expression of target genes, thereby inducing cell cycle arrest, apoptosis, senescence, DNA repair, or changes in metabolism. Mutations in this gene are associated with a variety of human cancers, including hereditary cancers such as Li-Fraumeni syndrome. Alternative splicing of this gene and the use of alternate promoters result in multiple transcript variants and isoforms. Additional isoforms have also been shown to result from the use of alternate translation initiation codons from identical transcript variants (PMIDs: 12032546, 20937277). [provided by RefSeq, Dec 2016]